## Department of Energy, Office of Science, Office of High Energy Physics Awards from FY 2018 Research Opportunities in Accelerator Stewardship FOA and LAB

Title	PI	Institution	Location
3D High Speed RF Beam Scanner for Hadron Therapy of Cancer	Nanni, Emilio	SLAC National Accelerator Laboratory	Menlo Park, CA
Development of Scanning Magnets to Enable Compact			
Superconducting Carbon-beam	Mustapha, Brahim	Argonne National Laboratory (ANL)	Lemont, IL
Fully Achromatic Superconducting Magnet Designs for Proton Therapy	,		
Gantries	Prestemon, Soren	Lawrence Berkeley National Laboratory (LBNL)	Berkeley, CA
High-Average-Power (HAP) Thermal Management for Ultrafast Lasers	Zuegel, Jonathan	University of Rochester	Rochester, NY
SCALING OF ACTIVE CONTROL OF LASER BEAM QUALITY AND			
CONTRAST FOR HIGH REP RATE LASER DRIVEN ACCELERATORS	Krushelnick, Karl	Regents of the University of Michigan	Ann Arbor, MI
Development of a High-efficiency and High-power Magnetron RF		Thomas Jefferson National Accelerator Facility	
Source for Accelerators	Rimmer, Robert	(TJNAF)	Newport News, VA
High-Efficiency Klystron with Post Acceleration	Carlsten, Bruce	Los Alamos National Laboratory (LANL)	Los Alamos, NM
6-D Analysis of Nonlinear Dynamics Using Square Matrix Method	Hao, Yue	Michigan State University	East Lansing, MI
Research in Advanced Artificial Intelligence Techniques for Modern			
Accelerator Control	Biedron, Sandra	University of New Mexico	Albuquerque, NM
Ion Channel Laser Based on Direct Laser Acceleration of a Shaped			
Beam Driver	Shvets, Gennady	Cornell University	Ithaca, NY
Controlled Injection of Electrons for Improved Performance of Laser-		The Board of Regents, University of Nebraska for	
Wakefield Acceleration	Umstadter, Donald	the University of Nebraska-Lincoln	Lincoln, NE
Preliminary Investigation of Novel Superconductors for Complex			
Cavity Geometries	Delayen, Jean	Old Dominion University Research Foundation	Norfolk, VA